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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet

1

of

12

Complete If Known

Application Number	09/432,503
Filing Date	November 2, 1999
First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

U.S. PATENT DOCUMENTS

Examiner	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
					T ³	T ⁴
	AA	08751,189	11-15-1996	Harrington, et al.		
	AB	60/038,750	02-20-1997	Counter, et al.		
	AC	3,817,837	06-18-1974	Tanenholz, et al.		
	AD	3,860,782	11-26-1974	Schaura, et al.		
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	AG	4,275,149	06-23-1981	Ullman, et al.		
	AH	4,277,437	07-07-1981	Maggio		
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	AR	6,093,809	07-25-2000	Cech, et al.		
	AS	6,256,535 - B1	07-10-2001	Villepontreau, et al.		
	AT	6,261,556 - B1	07-17-2001	Weinrich, et al.		
	AU	6,261,836 - B1	07-17-2001	Cech, et al.		
	AV	6,093,809	07-25-2000	Cech, et al.		
	AW	6,186,178	12/26-2000	Cech, et al.		
	AX	6,476,789 B1	11-05-2002	Cech, et al.		

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Examiner Initials ⁵	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ²	Number ⁴ Kind Code ⁴ (if known)				
	AY	JP	09154575-A		06-17-97		
	AZ	PCT	WO 84/03564		09-13-84		
	BA	PCT	WO 95/13382		05-18-95		
	BB	PCT	WO 96/01635		01-25-96		
	BC	PCT	WO 96/12811		05-02-96		
	BD	PCT	WO 98/19580		06-27-98		
	BE	PCT	WO 96/40868		12-19-98		
	BF	PCT	WO 98/01542		01-15-98		

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Sheet 2

of 12

Complete If Known

Application Number	09/432,503
Filing Date	November 2, 1999
First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

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		Number	Kind Code ² (if known)			
BG	PCT	WO 98/01543			01-15-98	
BH	PCT	WO 98/07636			03-05-98	
BI	PCT	WO 98/08938			02-26-98	
BJ	PCT	WO 98/21343			05-22-98	
BK	PCT	WO 98/37181			08-27-98	
BL	PCT	WO 98/45450			10-15-98	
BM	PCT	WO98/59040			12/30/98	
BN	PCT	WO99/01560			01/14/99	

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		Application Number	09/432,503		
		Filing Date	November 2, 1999		
		First Named Inventor	Cech, Thomas R., et. al.		
		Art Unit	1652		
		Examiner Name	Peter P. Tung		
Sheet	3	of	12	Attorney Docket Number	015389-002611US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS		
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	BO	1994 Genome Issue of <i>Science</i> (265:1981)
	BP	Anderson and Young. "Quantitative Filter Hybridization" in <i>Nucleic Acid Hybridization</i> pp73-111 (1985)
	BO	Ausubel <i>et al.</i> ; (1989); Current Protocols in Molecular Biology, pp 5.1-5.11, 16.1-16.3 and 16.9-16.20; John Wiley & Sons, New York NY
	BR	Autexier <i>et al.</i> , "Reconstitution of human telomerase activity and Identification of a minimal functional region of the human telomerase RNA." (1996) <i>EMBO J.</i> , 15:5928
	BS	Auxier and Greider, "Functional reconstitution of wild-type and mutant <i>Tetrahymena</i> telomerase," (1994) <i>Genes Develop.</i> , 8:563
	BT	Berger and Kimmel, <i>Guide to Molecular Cloning Techniques</i> ; (1987); Meth. Enzymol.; vol. 152; pp 309-389; Academic Press; San Diego CA
	BU	Blessman <i>et al.</i> , "Addition of Telomere-Associated HeT DNA Sequences "Heals" Broken Chromosome Ends In <i>Drosophila</i> ," (1990) <i>Cell</i> , 61:663
	BV	Bitter <i>et al.</i> , "Expression and secretion vectors for yeast," Meth Enzymol., (1987) 153:516
	BW	Blackburn and Chiou, "Non-nucleosomal packaging of a tandemly repeated DNA sequence at termini of extrachromosomal DNA coding for rRNA in <i>Tetrahymena</i> ," (1981) <i>Proc. Natl. Acad. Sci.</i> , 78:2263
	BX	Blackburn and Gall, "A tandemly repeated sequence at the termini of the extrachromosomal ribosomal RNA genes in <i>Tetrahymena</i> ," (1978) <i>J. Mol. Biol.</i> , 120:33
	BY	Blackburn, "Telomerases," (1992) <i>Ann. Rev. Biochem.</i> , 61:113
		Bodnar <i>et al.</i> , "Extension of Life-Span by Introduction of Telomerase into Normal Human Cells," (1998) <i>Science</i> , 279:349
		Bradford, "A Rapid and Sensitive method for the Quantitation of Microgram Quantities of Protein Utilizing the Principle of Protein-Dye Binding," (1976) <i>Anal. Biochem.</i> , 72:248
		Braunstein <i>et al.</i> , "Transcriptional silencing in yeast is associated with reduced nucleosome acetylation," (1993) <i>Genes Develop.</i> , 7:592

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Sheet 4 of 12

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Application Number	09/432,503
Filing Date	November 2, 1999
First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Calvo <i>et al.</i> , "Identification of hnRNP P2 as TLS/FUS using electrospray mass spectrometry," (1995) <i>RNA</i> , 1:724	
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		Chan and Tye, "Organization of DNA sequences and replication origins at yeast telomeres," (1983) <i>Cell</i> , 33:563	
		Colbere-Garapin <i>et al.</i> , "A new dominant hybrid selective marker for higher eukaryotic cells," (1981) <i>J. Mol. Biol.</i> , 150:1	
		Cole <i>et al.</i> , "The EBV-hybridoma technique and its application to human lung cancer," <i>Monoclonal Antibodies and Cancer Therapy</i> , Alan R. Liss Inc., New York NY 77-96 (1985)	
		Collins <i>et al.</i> , "Purification of Tetrahymena telomerase and cloning of genes encoding the two protein components of the enzyme," (1995) <i>Cell</i> , 81:677	
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		Cogburn, <i>Dictionary of Biotechnology</i> , (1994): pp. 101-102, 283, 301 and 332; Stockton Press, New York NY	
		Cote <i>et al.</i> , "Generation of human monoclonal antibodies reactive with cellular antigens," (1983) <i>Proc. Natl. Acad. Sci.</i> , 80:2026	
		Counter <i>et al.</i> , "The catalytic subunit of yeast telomerase," (1997) <i>Proc. Natl. Acad. Sci.</i> , 94:9202	
		Counter <i>et al.</i> , (1994) <i>Proc. Natl. Acad. Sci.</i> , 91:2900	
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		Dieffenbach and Dveksler, <i>PCR Primer, a Laboratory Manual</i> ; (1995) pp. 131-156, 453-462 and 507-580; Cold Spring Harbor Press, Plainview NY	
		Duplaa <i>et al.</i> , "Quantitative analysis of polymerase chain reaction products using biotinylated dUTP incorporation," (1993) <i>Anal. Biochem.</i> , 212:229	

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**INFORMATION DISCLOSURE
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Sheet 5 of 12

Complete if Known

Application Number	09/432,503
Filing Date	November 2, 1999
First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
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		Greider, "Telomere Length Regulation," (1996) <i>Ann. Rev. Biochem.</i> , 65:337	

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Sheet	6	of	12	Attorney Docket Number	015389-002611US

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		Hampton <i>et al.</i> : <i>Serological Methods a Laboratory Manual</i> ; (1990); pp. 33-86, 179-286; APS Press, St Paul MN
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		Kosbor <i>et al.</i> , "The production of monoclonal antibodies from human lymphocytes," (1983) <i>Immunol. Today</i> 4:72

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		Lamond and Sproat; (1994) "Isolation and Characterization of Ribonucleoprotein Complexes;" In <i>RNA Processing: A Practical Approach</i> ; (Higgins, S.J. and Hawes, B.D. Eds.), Volume 1; pp103-140	
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		Lingler <i>et al.</i> , "Reverse transcriptase motifs in the catalytic subunit of telomerase," (1997) <i>Science</i> , 276:561	
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		Melby <i>et al.</i> , "Quantitative measurement of human cytokine gene expression by polymerase chain reaction," (1993) <i>J. Immunol. Meth.</i> , 159:235	
		Merrifield, "Solid phase peptide synthesis. I. The synthesis of a tetrapeptide," (1963) <i>J. Am. Chem. Soc.</i> , 85:2149	

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STATEMENT BY APPLICANT**

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Sheet **8** of **12****Complete If Known**

Application Number	09/432,503
Filing Date	November 2, 1999
First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Meyerzon <i>et al.</i> , "hEST2, the Putative Human Telomerase Catalytic Subunit Gene, Is Up-Regulated in Tumor Cells and during Immortalization," (1997) <i>Cell</i> , 90:765	
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		Sambrook <i>et al.</i> ; <i>Molecular Cloning, A Laboratory Manual</i> ; (1989); pp. B.1-B.86 and 16.1-17.44; Cold Spring Harbor Press, Plainview NY	

Examiner Signature		Date Considered
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Sheet	9	of	12	Filing Date	November 2, 1999
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		Sandell <i>et al.</i> , "Transcription of yeast telomere alleviates telomere position effect without affecting chromosome stability." (1994) <i>Proc. Natl. Acad. Sci.</i> , 91:12061	
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		Shampay and Blackburn, "Generation of telomere-length heterogeneity in <i>Saccharomyces cerevisiae</i> ," (1988) <i>Proc. Natl. Acad. Sci.</i> , 85:534	
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Sheet 10 of 12

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		Wellinger et al., "Saccharomyces Telomeres Acquire Single-Strand TG ₁₋₅ Tails Late in S Phase," (1993) <i>Cell</i> 72:51	
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